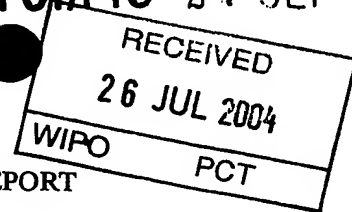


PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)



Applicant's or agent's file reference 29981.57	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/US03/09678	International filing date (day/month/year) 27 March 2003 (27.03.2003)	Priority date (day/month/year) 27 March 2002 (27.03.2002)
International Patent Classification (IPC) or national classification and IPC IPC(7): H04L 12/66 and US Cl.: 455/433,466,560,561,436; 370/352,353		
Applicant SPATIAL WIRELESS INC.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:
 - I ☒ Basis of the report
 - II ☐ Priority
 - III ☐ Non-establishment of report with regard to novelty, inventive step and industrial applicability
 - IV ☐ Lack of unity of invention
 - V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - VI ☐ Certain documents cited
 - VII ☐ Certain defects in the international application
 - VIII ☐ Certain observations on the international application

Date of submission of the demand 17 October 2003 (17.10.2003)	Date of completion of this report 16 July 2004 (16.07.2004)
Name and mailing address of the IPEA/US Mail Stop PCT, Attn: IPEA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703)305-3230	Authorized officer Sujatha Sharma <i>Rugenia Zogor</i> Telephone No. 703-305-3800

Form PCT/IPEA/409 (cover sheet)(July 1998)

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I. Basis of the report**1. With regard to the elements of the international application:***

- ☒ the international application as originally filed.
- ☒ the description:
pages 1-10 _____ as originally filed
pages NONE _____, filed with the demand
pages NONE _____, filed with the letter of _____.
- ☒ the claims:
pages 11-14 _____, as originally filed
pages NONE _____, as amended (together with any statement) under Article 19
pages NONE _____, filed with the demand
pages NONE _____, filed with the letter of _____.
- ☒ the drawings:
pages 1-16 _____, as originally filed
pages NONE _____, filed with the demand
pages NONE _____, filed with the letter of _____.
- ☐ the sequence listing part of the description:
pages NONE _____, as originally filed
pages NONE _____, filed with the demand
pages NONE _____, filed with the letter of _____.

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in printed form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☒ The amendments have resulted in the cancellation of:

- ☒ the description, pages none
- ☒ the claims, Nos. none
- ☒ the drawings, sheets/fig none

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/US03/09

V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. STATEMENT

Novelty (N)	Claims <u>4,6-10,14,16-20</u>	YES
	Claims <u>1-3,5,11-13,15,21</u>	NO
Inventive Step (IS)	Claims <u>NONE</u>	YES
	Claims <u>1-21</u>	NO
Industrial Applicability (IA)	Claims <u>1-21</u>	YES
	Claims <u>NONE</u>	NO

2. CITATIONS AND EXPLANATIONS

Please See Continuation Sheet

Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Claims 1-3,5,11-13,15,21 lack novelty under PCT Article 33(2) as being anticipated by Josse [US 6,104,929].

Regarding claims 1,11,21 Josse discloses a method for packetized data transmission over a radio network. Josse further discloses a method comprising: exchanging messages between a mobile station (MS) and the Radio Access Network (RAN) and between the RAN and the core network (CN) through a hybrid atrium, wherein the hybrid atrium includes an ability to exchange short messages with the MS. See summary of invention, Col. 1, lines 42-65, col. 2, lines 44-67, col. 3, lines 1-21 and col. 4, lines 23-56 and tables 1-3.

Regarding claims 2,12 Josse further discloses a method wherein exchanging the messages includes:
- initiating a data session by the MS with the hybrid atrium through the base station controller (see summary of invention);
- updating a Home Location Register (HLR) by the Hybrid Atrium (see summary of invention, col. 5, lines 13-15, col. 7, lines 23-48, col. 10, lines 22-65);
- informing a QoS by the HLR and negotiating a QoS by the hybrid MSC (SEE TABLES 1-3)

Regarding claim 3,13 Josse discloses a method further including:
- sending a short message to the MS from the hybrid atrium and sending a short message reply from the MS to the hybrid atrium (see summary of invention and tables 1-3).

Regarding claims 5,15, Josse further discloses a method of updating a CN with a data session context update through the Hybrid Atrium. See summary of invention and col. 5, lines 13-15 and col. 7, lines 23-48.

Claims 4,14 lack an inventive step under PCT Article 33(3) as being obvious over Josse [US 6,104,929] in view of Ahopelto [US 5,970,059].

Regarding claims 4, 14, Josse discloses all the limitations as claimed. However he does not disclose a method of establishing a point to point protocol (PPP) connection between the hybrid atrium and the MS for data transmission between the hybrid atrium and the MS.

The use of PPP protocol for data transmission is well known in the art as indicated by Ahopelto, who teaches a method of establishing a point to point protocol (PPP) connection between the hybrid atrium and the MS for data transmission between the hybrid atrium and the MS. See summary of invention and col. 11, lines 7-15.

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to use PPP protocol for data transmission as a design choice for the given system and for performance enhancement for data transmission.

Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Claims 6-10, 16-20 lack an inventive step under PCT Article 33(3) as being obvious over Josse [US 6,104,929] in view of Ahopelto [US 5,970,059] and further in view of Einola WO 99/66740].

Regarding claims 6,7,16,17 Josse and Ahopelto disclose all the limitations as claimed. However they do not disclose a method of sending the termination request from the BSC to the hybrid atrium and then to CN to terminate the PPP connection.

Einola, in the same field of endeavor, teaches a method of sending the termination request from the BSC to the hybrid atrium and then to CN to terminate the PPP connection. See abstract and page 4, line 19 - page 9, line 10.

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to provide the teachings of Einola to Josse and Ahopelto in order to utilize the resources efficiently and perform a successful handover.

Regarding claims 8,18, Einola further discloses a method to handoff between packet data service nodes. See abstract and page 4, lines 5-12 and line 19 - page 9, line 10 and Figs. 4-11.

Regarding claims 9,19, Einola further discloses a method of handing off between Serving General Packet radio Service Serving Nodes. See abstract and page 4, lines 5-12 and line 19 - page 9, line 10 and Figs. 4-11.

Regarding claims 10,20, Einola further discloses a method of handing off between a packet data service node and a Serving General Packet radio Service Serving Nodes. See abstract and page 4, lines 5-12 and line 19 - page 9, line 10 and Figs. 4-11.

----- NEW CITATIONS -----

NONE